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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application Number: 10/622,634
Filing Date: July 21, 2003
Appellant(s): WILEY, PATRICK CARL

Thomas W. Bailey
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 3/20/2009 appealing from the Office action mailed 10/20/2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

**NEW GROUND(S) OF REJECTION**

Claims 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stonwell et al. (US 5215402) in view of Corbin et al. (US 4854771) Pacey (EP0041335) and Wiley (US 5653552).

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

| | | |
|---|---|---|
| US 5,215,402 | STONWELL | 6-1993 |
| US 4,854,771 | CORBIN ET AL. | 8-1989 |
| EP 0041335 | PACEY | 12-1981 |
| US 5653552 | WILEY | 8-1997 |

3M Applications of Stamark Pre-Cut Symbols and Legends, Information folder 5.8 (5/2002), page 6

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***A. Claims 1, 4, 6-10 and 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stonwell et al. (US 5215402) in view of Corbin et al. (US 4854771) Pacey (EP0041335) and Wiley (US 5653552).***

Stonwell et al. discloses a process for imprinting a pattern in an asphalt surface where a grid-like template is compressed into an asphalt surface. The template is removed and the asphalt is allowed to harden, then a thin coating of colored concrete can be added to the surface of the patterned asphalt to enhance the brick and mortar effect (abstract).

Stonwell et al. is silent as to providing a pre-formed thermally settable sheet made of thermoplastic material; providing at least one further pre-formed thermally settable sheet; placing the first and at least one further sheet on the asphalt in an

aligned configuration then gradually heating in situ to a temperature sufficient to bond the sheets to configure to the first patter as required by **claim 1**.

Corbin Jr. et al. teaches a method of installing a pre-formed pavement marking material on a asphalt surface where the asphalt is softened by means of a portable infrared heater to a temperature sufficient so the pre-formed marking material may be pressed into the asphalt (abstract, col. 2, lines 33-37) and placing the marking material onto the heated pavement (heating in situ), and pressing the marking material using a roller (col. 2, lines 56-66). Corbin Jr. et al. further teaches that the pre-formed thermoplastic marking materials are superior to painted marking material because they have a longer service life (col. 1, lines 47-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al. to include the preformed marking material as taught by Corbin, Jr. et al. One would have been motivated to do so because both disclose processes of marking asphalt surfaces and Corbin Jr. et al. teaches the use of preformed marking material over coating because of the longer service life.

Pacey et al. discloses a process for heat bonding thermoplastic road marking material to a road which comprises heating the marking to its melting point to create a bond between the marking and the road surface (page 1, lines 16-page 2, line 3). Pacey discloses the marking may be supplied in two or more sections such as an arrowhead, which would require aligning of the pieces when being applied to the road (page 5, line 36- page 6, line 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al. to include the heat bonding of Pacey et al. One would have been motivated to do so because both disclose processes for providing marking materials to roadways and Pacey further teaches that markings can be in more than one section therefore the process is useful in order to assure the sections are aligned properly.

Wiley teaches a process for heating by moving a heater over a surface in a successive forward and backward direction (abstract) which allows for the asphalt to be heated uniformly and efficiently with minimal or no overheating (col. 6, lines 15-33).
It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stowell et al. in view of Corbin Jr. et al. to include gradually heating of the substrate. One would have been motivated to do so because both discloses processes for heating pavement in order to apply a marking material and Wiley teaches that heating gradually provides uniform heating in an efficient manner while minimizing or eliminating burning or smoking (Wiley et al. col. 5, lines 40-44).

Corbin Jr. et al. teaches using a marking material having a thickness of about 25-125 mils (col. 1, lines 12-17) as required by **claim 4**.

The sheet is heated to a temperature of 150-300$^{o}$F as stated by Corbin Jr. et al. (col. 2, lines 56-57) as required by **claim 7**. Wiley et al. teaches gradually heating the sheet to a temperature of 100-190$^{o}$C (220-374$^{o}$F) (col. 8, lines 29-34) as required by **claim 8**.

Stonwell et al. teaches that the pattern is formed by forming a hot and pliable asphalt surface; placing a template on the surface and imprinting the template to form a first pattern then the template is removed (abstract, col. 2, lines 60-66) since the asphalt is hot meaning it was heated to form into a pliable surface as required by **claims 9 and 10**.

As stated above Stonwell modified with Corbin Jr. et al. teaches placing a pre-formed thermally settable sheet on a substrate having a first and second surface where the second surface is not in contact with the substrate (Corbin et al. teaches that the marking material is pressed into the asphalt after being applied which means the second surface is not in contact with the substrate prior to pressing); heating the sheet in situ to a temperature for the surface to adhere to the substrate.

***B. Claims 11, 12, 14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stonwell et al. (US 5215402) in view of Corbin, Jr et al. (US 4854771) and Pacey (EP0041335) as applied to claim 1 above, and further in view of Eigenmann (US 3235436).***

The teachings of Stonwell et al. in view of Corbin, Jr. et al. and Pacey as applied to claim 1 are as stated above. However, these references are silent as to using a first sheet that is formed in a second pattern matching the first pattern and is alignable therewith as well as being subdividable into a plurality of discrete sections as required by **claims 11 and 12**.

Eigenmann teaches a process for applying marking strips for crosswalk lines and other traffic aids onto a roadway where the process requires forming a plurality of patterns by subdividing the marking material into discrete sections (col. 4, lines 45-59) and matching the patters and aligning the patterns (Fig. 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al., Corbin Jr. et al. and Pacey to form a plurality of discrete sections and aligning and forming a plurality of patterns to form a desired design in a roadway as taught by Eigenmann. One would have been motivated to do so because Eignemann teaches that the process is advantageous over using paint to form designs in pavement and are more durable under severe road conditions (col. 1, lines 14-23).

Eignemann teaches aligning patterns in a non-overlapping relation and where the markings are partially surrounded by another one of the markings (Fig. 4) as required by **claim 14**.

Stonwell et al. teaches patterns that are formed to represent paving stones, cobblestones and bricks (col. 3, lines 1—7 and Fig. 2) which would simulate grout lines and a protective coating is applied and aligned to the edges of the lines as required by **claims 16 and 17**.

***C. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stonwell et al. in view of Corbin Jr et al. and Pacey as applied to claim 1 and in further view of 3M Application of Stamark Pre-Cut symbols and legends***.

The teachings of Stonwell et al. in view of Corbin Jr et al. and Pacey as applied to claim 1 are as stated above. These references are silent as to applying sheets in an overlapping relation as required by **claim 15**.

3M teaches markings that are applied to roadways such as a railroad crossing (X) symbol which comprises laying out the first diagonal line on the pavement then the overlapping the other diagonal line over the first sheet (Page 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al. in view of Corbin Jr et al. and Pacey with the marking of 3M when required to form a certain design which resembles that of a railroad crossing because 3M discloses an optimal way of forming the desired design.

## NEW GROUND(S) OF REJECTION

***D. Claims 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbin Jr .et al. in view of Stowell et al. and Pacey et al. and further in view of Wiley (5653552).***

Corbin Jr. et al. teaches a method of installing a pre-formed pavement marking material on a asphalt surface where the asphalt is softened by means of a portable infrared heater to a temperature sufficient so the pre-formed marking material may be pressed into the asphalt (abstract, col. 2, lines 33-37) and placing the marking material onto the heated pavement (heating in situ), and pressing the marking material using a roller (col. 2, lines 56-66). Corbin Jr. et al teaches that the pre-formed marking material has a first and second surface where the second surface is not in contact with the

substrate because it states that the marking material is pressed into the asphalt after being applied which means the second surface is not in contact with the substrate prior to pressing. Corbin Jr. et al. further teaches that the pre-formed thermoplastic marking materials are superior to painted marking material because they have a longer service life (col. 1, lines 47-49).

Corbin Jr. et al. is silent as to imprinting the sheet by placing a template on the second surface of the sheet; compressing the template to form an impression in the sheet and substrate then removing the template from the second surface

Stonwell et al. discloses a process for imprinting a pattern in an asphalt surface where a grid-like template is compressed into an asphalt surface. The template is removed and the asphalt is allowed to harden, then a thin coating of colored concrete can be added to the surface of the patterned asphalt to enhance the brick and mortar effect (abstract). Stonwell et al. teaches that the template is compatible with hot asphalt surfaces unlike other conventional tools used to form patterns in hot asphalt.

It would have been obvious to one having ordinary skill in the art to modify the process of Corbin Jr. et al. to include the imprinting process of Stonwell et al. One would have been motivated to do so because both are directed towards processes involving decorating asphalt surfaces and Stonwell et al. further teaches an operable template that can be used with hot asphalt.

Pacey et al. discloses a process for heat bonding thermoplastic road marking material to a road which comprises heating the marking to its melting point to create a bond between the marking and the road surface (page 1, lines 16-page 2, line 3). Pacey

discloses the marking may be supplied in two or more sections such as an arrowhead, which would require aligning of the pieces when being applied to the road (page 5, line 36- page 6, line 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al. to include the heat bonding of Pacey et al. using the blow torch. One would have been motivated to do so because both disclose processes for providing marking materials to roadways and Pacey further teaches that markings can be in more than one section therefore the process is useful in order to assure the sections are aligned properly.

Wiley teaches a process for heating by moving a heater over a surface in a successive forward and backward direction (abstract) which allows for the asphalt to be heated uniformly and efficiently with minimal or no overheating (col. 6, lines 15-33).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stowell et al. in view of Corbin Jr. et al. and Pacey to include gradually heating of the substrate. One would have been motivated to do so because both discloses processes for heating pavement in order to apply a marking material and Wiley teaches that heating gradually provides uniform heating in an efficient manner while minimizing or eliminating burning or smoking (Wiley et al. col. 5, lines 40-44).

The sheet is heated to a temperature of 150-300°F as stated by Corbin Jr. et al. (col. 2, lines 56-57). Wiley et al. teaches gradually heating the sheet to a temperature of 100-190°C (220-374°F) (col. 8, lines 29-34).

Corbin Jr. et al. in combination with Stonwell et al. and Wiley teaches coating a substrate by forming a first pattern in a asphalt substrate; placing a pre-formed thermally settable thermoplastic sheet on the substrate and heating in situ to a temperature to sufficiently adhere the sheet to the substrate in the first pattern where the sheet as a first and second surface (Corbin Jr. et al.) and the heating step is conducted so that there is a gradual increase in temperature. The heating apparatus is mounted on a vehicle, which includes a frame that can periodically pass over the sheet (Wiley col. 7, lines 49-62).

**(10) Response to Argument**

***A. Claims 1, 4, and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stowell et al. (US 5215402) in view of Corbin et al. (US 4854771) Pacey (EP0041335) and Wiley (US 5653552).***

The applicant argues that there is insufficient motivation to combine the Stowell et al. and Corbin et al. references since the Stowell et al. reference describes a technique of simulating brick or cobblestone while the Corbin et al. reference is using noticeable yellow or white colors for pavement marking which are not suitable for simulating cobblestone, brick or mortar (see pages 11 and 12 of the Appeal Brief). The Examiner disagrees with the Applicant's position because Corbin et al. clearly shows

the advantages of using preformed materials taking on the shape and color desired for a marking material over using a paint as shown in the process of Stowell et al. (see col. 1, lines 7-12) therefore one of ordinary skill having the issue of the pavement markings (i.e. to emulate brick, cobblestone, etc) having shorter service life would look to the art of Corbin et al. and modify the preformed materials to fit the specific process to which they are being used especially since both are directed to treating asphalt surfaces.

The applicant further argues, neither Stowell et al. nor Corbin et al. disclose heating the thermoplastic performed marking material rather than heating the asphalt. The Examiner agrees, however, Pacey is cited in the rejection to provide an alternate method of attaching the marking material to the asphalt surface by heating the thermoplastic marking material with a blow torch while it is being laid. The applicant argues that the blow torch method of heating the thermoplastic material can not be used because it is not suitable for large thermoplastic sheets to which the application is directed and cites page 1, line 16 - page 2, line 23 of the specification. However, the claims as presented do not limit the size of the thermoplastic material therefore the argument is moot.

The applicant argues that the heating element of Wiley would not be suitable for traveling on the thermoplastic sheets since they become tacky after heating. The Pacey reference teaches the use of a blow torch to heat the thermoplastic sheets, the Wiley reference is used to show gradual heating in order to prevent or minimize burning and smoking, therefore it would have been obvious to one of ordinary skill to modify the blow

torch of Pacey to allow gradual heating by backward and forward motion as shown by Wiley.

***B. Claims 11, 12, 14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stowell et al. (US 5215402) in view of Corbin, Jr et al. (US 4854771) and Pacey (EP0041335) as applied to claim 1 above, and further in view of Eigenmann (US 3235436).***

The applicant argues there is no motivation to combine Stowell et al, Corbin Jr et al. and Pacey with Eigenmann since discloses using continuous strips of thermoplastic material as marking material and such marking materials can not be used for simulating cobblestone or brick and mortar in an asphalt surface. Eigneman teaches the advantages of using subdivided marking material and matching the pattern and aligning the patterns of the divided marking material to form a large pattern. Eigneman teaches the advantages of using the marking material paint as taught by Stonwell et al. in order to make a design that is more durable under severe road conditions therefore one of ordinary skill having the issue of the pavement markings (i.e. to emulate brick, cobblestone, etc) having shorter service life would look to the art of Eigennmann and modify the preformed materials to fit the specific process to which they are being used especially since both are directed to treating asphalt surfaces.

As to the arguments with respect to claims 16 and 17, The Stowell et al. reference as modified would teach the grout lines for simulating the brick would be formed using the thermoplastic material in order to extend the life of the brick or cobblestone decoration provided to the asphalt surface.

***C. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stowell et al. in view of Corbin Jr et al. and Pacey as applied to claim 1 and in further view of 3M Application of Stamark Pre-Cut symbols and legends***.

The applicant argues that the 3M reference teaches forming loarge road markings that look nothing at all like cobblestone or brick and mortar. However, the 3M reference was relied on to show that it is possible to overlap the marking materials when forming a pattern as such in forming a brick or cobblestone pattern parts of the strips can overlap one another such as in Fig. 3 of Stowell at locations 26 and 16, the strips can overlap when using substituting the paint material with the sheets.

***D. Claims 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbin Jr .et al. in view of Stonwell et al. and Pacey et al. and further in view of Wiley (5653552).***

The response to the arguments with respect to the rejection of claims 36-41 are the same as those addressed above in section A.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer

exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/C. I. S./

Examiner, Art Unit 1792

**A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:**

/Christopher A. Fiorilla/

Chris Fiorilla

Supervisory Patent Examiner, Art Unit 1700

Conferees:

/Timothy H Meeks/

Supervisory Patent Examiner, Art Unit 1792

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